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**SOME NORTH AMERICAN DIPTERA FROM THE
SOUTH WEST.**

BY E. T. CRESSON, JR.

PAPER I.

ORTALIDÆ.

(Plate VI)

The material treated of in this paper was collected by J. A. G. Rehn and H. L. Viereck chiefly in New Mexico during the summer of 1902, under the direction of the Acad. Nat. Sci., Phila.; also a few species collected in Mexico by J. F. McClendon during the summer of 1903, some remarks on whose trip may be found in Ent. News, Vol. XVII, p. 26, 1906.

***Ostracocœlia mirabilis* Gig-Toz.**

Guadalajara, Mexico. One ♂.

***Rivellia conjuncta* Lw.**

Guadalajara, Mexico. One ♀.

***Rivellia occulta* v. d. W.**

Guadalajara, Mexico. One ♀.

***Stenopterina mexicana* Mcq.**

Round Mt., Texas. Two ♂.

These agree well with Loew's description, in his monograph, of *S. cœrulescens* Lw., which is a synonym of the above; in addition they have the following distinct characters: the anterior and the lower posterior orbits pollinose; antennal base and the space between them black; a distinct black bristle on the posterior portion of cheeks; proboscis nearly black; the super alar groove of thorax rufous; a small callous before the wing in the dorso-pleural suture, yellow or rufous; the last segment of abdomen one-third longer than the penultimate; squamulæ white or cream; legs yellow; the fore coxæ yellow, silvery on the anterior surface; tarsi infuscated.

HIATUS gen. nov. (Plate VI, figs. 1, 2, 3, 4).

Long and slender flies; head longer than high; front as wide as the eye and parallel, protruding at antennæ, face not distinctly carinate; eyes nearly round; cheeks very narrow; mouth very large, drawn upwards in front, and protruding as far forwards as the front; thorax with three dorso-centrals behind the suture; first vein bristly at end; hind femora much thickened.

Head as long or longer than high, broader than high, wider than the thorax. Eyes large and nearly round. Front as broad as eyes, projecting at the antennæ, not concave, smooth; orbits parallel as far as antennæ, then narrowing; besides the usual vertical bristles are two transfrontals, otherwise bearing scattered minute hairs. Face short, excavated in profile; antennal foveæ shallow; carina acute; sides of face very narrow, overhanging the depression, the ridge minutely bristly on lower portion. Cheeks very narrow, about one-eighth to one-tenth height of eye, giving the head in profile, a flat appearance. Occiput convexed, about one-eighth length of head. Mouth very large, one-half width of head, drawn upwards in front; margin bare, excepting towards the occiput. Clypeus small. Proboscis short, thick. Palpi filiform, thickened at tip. Antennæ nearly as long as face; second joint very short; third joint rounded at apex, front corner obtuse, not sharply pointed, front edge flat, not concave; arista bare, distinctly thickened at base.

Thorax dusted whitish, elongate, nearly twice as long as wide, bearing bristles as follows: three post dorso-centrals, two post alars, one humeral, two nolapleurals, a distinct mesopleural, one propleural, very small, a series of three to five small bristles on the prothorax before the prostigma. Scutellum with four marginal bristles.

Abdomen, of *male*, hardly longer than the thorax, broadest at first and second segments; the first segment nearly twice as long as the second; the fourth as long as the first; the fifth somewhat swollen and retracted; of *female*, longer than thorax, otherwise as male; first segment of the ovipositor flat, as broad as the fifth segment; second as long as first.

Legs long; femora thickened, especially of the hind leg; prominent bristles as follows: anterior femora with a few extensors, a series of minute lateral flexors; middle tibia with a few apical flexors; hind femora with one median lateral extensor.

Wings one and one-half times as long as the thorax; costa and

hind margin parallel; first vein bristly the entire length of stigma; auxiliary vein distinct; stigma nearly as long as costal cell; third vein straight, parallel with fourth vein; last section of fourth vein twice as long as the preceding section; cross veins straight and perpendicular, the small cross-vein beyond the middle of the discal cell, but before the end of the first vein; anal cell not acute; wing hyaline, excepting the dark stigma and a spot at the apex of the submarginal cell.

This genus seems to be a transition between the groups *Cephalinae* and *Ortalinae*. From the former it is excluded by the small proboscis and the small clypeus and the presence of propleural bristle; from the latter by its large mouth, and as that seems to be the only distinct difference, I include this genus in the group *Ortalinae*. *Tephronota* seems to be its closest relative, but differs mainly by its long head, round eyes, and the mouth being distinctly drawn up in front.

Hiatus fulvipes sp. nov. (Pl. VI, figs. 1, 2, 3, 4).

In general black or brownish. Front light yellow at base of antennæ to brown at the vertex, but the ocellar region and sides of vertex black, whitish pollinose, excepting a middle vitta; two frontal besides the usual vertical bristles, otherwise covered with scattered minute hairs. Face white below, to light yellow above, with some brown under the antennæ, pollinose only on the narrow sides. Cheeks whitish, to blackish towards the occiput, which is brownish black and sparingly pollinose. Few bristles on the posterior portion of the oral margin, and a few very minute bristles on the posterior extension of the facial ridge which runs nearly to the occiput. Eyes dark brown. Antennæ of male brown, lighter at base, nearly as long as face; third joint four to five times as long as second, and as wide as long. Arista black, except the swollen base; the antepenultimate joint brown, longer than thick. Antennæ of female shorter and darker, arista darker and the third joint about one and one-half times as wide as long. Palpi yellow, nearly filiform. Proboscis brown.

Thorax black, evenly pollinose above; pleuræ brownish, more shining; the usual lateral bristles well developed, but those of the dorsum weak, 3 pair dorso-centrals, no acrosticals. Metanotum black, slightly pollinose. Scutellum flat, black, pollinose, with four bristles. Squamulæ small, brownish. Halteres brownish.

Abdomen shining brownish black. Ovipositor black, first section half again as long as the fifth abdominal segment. Legs in general yellow; fore coxæ whitish, hind femora of ♂ very much enlarged and darker, knees brown; of ♀ scarcely enlarged, not distinctly darker; the largest bristles are on the fore femora, and one lateral extensor on the hind femora, otherwise the legs are covered with minute hair-like bristles.

Wings hyaline, but with stigma, and a spot at end of second vein, brown; second vein straight; small cross-vein beyond middle of discal cell; all veins whitish or semi-hyaline towards base of wing. Length ♀, over all, 5 mm.; ♂ 3 mm.

Alamogordo, N. Mex. One ♂, one ♀. Type in Acad. Nat. Sci. Phila. collection.

***Tetanops luridipennis* Lw.**

East Las Vegas, N. M. One ♂.

***Tetanops vittifrons* v. d. W.**

Guadalajara, Mexico. Two ♀.

***Automola rufa* sp. nov. (Pl. VI, fig. 5).**

Yellow to red and black; all bristles black.

Front yellow, darker at vertex, covered with minute bristles; one pair of frontals and the usual vertical bristles. Face rufous; antennal foveæ rather deep, running to oval margin, median carina wide, light yellow. Cheeks light brown, bare, except towards the oral margin and the occiput. Clypeus rufous. Antennæ rufous, third joint four times as long as the second, roundly pointed anteriorly; arista of like color about one-half again as long as third antennal joint, but slightly larger and darker at base. Eyes dark brown. Occiput convexed, bare below, except the oral margin and near the cheeks, light brown below, darker above. Palpi and proboscis rufous.

Thoracic dorsum dark brown, lightly pollinose, convexed with minute erect bristles; lateral margins and humeri yellow, shining, no acrosticals, two pair dorso-central bristles, the series of bristles on the sternopleura near the middle coxæ very conspicuous; mesopleura and sternopleura dark brown, the remainder of the pleura more rufous; metanotum black. Scutellum flat, reddish, with four bristles. Squamula brownish. Halteres whitish.

Abdomen distinctly arched, narrowly elongate, the first segment reddish and is covered with minute erect bristles, excepting a bare dorsal median cross band, and a bare pollinose posterior margin; the second and third segments blackish, also covered with minute bristles, but smaller and appressed, no bare median cross band, the posterior margins bare but not pollinose; first, second and third segments have a series of stout, erect, pre-marginal bristles; the fourth segment brown, also covered with appressed minute bristles, and the series of stout erect bristles are marginal.

Legs reddish, hind coxæ lighter; all tarsi yellow, middle tibiæ with a series of short stout bristles on the middle of the posterior side; front and hind femora armed; hind coxæ with a tooth-like projection near the joint, which is armed with long bristles, and one bristle on the lateral side; all other coxæ armed.

Wings grayish hyaline; small cross-vein beyond the middle of the discal cell; anal cell obtuse, third and fourth veins parallel. Base of wing infusate, otherwise provided with three complete dark brown cross-bands; the first and widest passing through the stigma and base of discal cell to the posterior margin; the second arising between the ends of the first and second veins, passing through the posterior cross-vein to the posterior margin; the last arising at the end of second vein and dissolving in the second posterior cell; the rudiments of another band between the second and third bands form a broad spot in the submarginal cell and a small spot in the first posterior cell, and is cross connected to the third band in the marginal cell. Length 5½ mm.

Alamogordo, N. Mex. One ♂. Type in Acad. Nat. Sci. Phila. collection.

The markings of the wings brings this species near *A. trifasciata* Wied. (according to description), but its black scutellum, gray abdomen and black legs will readily characterize it.

The markings of the wings alone will separate it from *A. automara* Wied. The figure of the wing of *A. automara* Wied. in the Biol. Cent.-Amer. shows the third vein very sinuate at the apex. This species has no indication of such.

This genus, as Loew states, "is not very well placed in the family Ortalidæ," but disregarding the presence of the unusual preapical bristles, it will fall in the subfamily Ortalinæ.

***Pterocalla undulata* sp. nov.** (Pl. VI, fig. 6).

In general, entirely grey-ochreous, pollinose, dotted and striped with coffee-brown.

Head more yellowish. Front with minute black bristles, excepting on the frontal lunule; the ocellar region brownish; one pair frontals besides the usual vertical bristles. Cheeks with numerous black bristles on the posterior portion adjoining the occiput; the occiput more whitish; the upper portion of the posterior orbits brownish. Antennæ reddish, the third joint about twice as long as wide; the arista twice as long as third joint, black. Eyes black. Palpi brown at tip. Proboscis black.

Thorax dotted with brown on the dorsum, and bearing one pair acrosticals and two pair dorso-central bristles; the pleuræ irregularly striped longitudinally. Scutellum convexed, dotted, with four bristles. Squamula blackish. Halteres whitish.

Abdomen same color as the thorax, having a transverse row of spots on the dorsum of first to third segments; the posterior margins of all segments with an irregular brown border interrupted in the middle; the medium portion especially and somewhat all the dorsum of all but the first segment minutely spotted.

Legs in general yellow; fore and hind femora somewhat brownish; two indistinct bands on the hind tibia; all tarsi light yellow.

Wings rather broader than usual, very obtusely rounded at apex; in general brown, darker at base; the posterior margin clearly hyaline only below the fifth vein, and but slightly so in the second posterior cell; two small hyaline indentations on the anterior margin, at the ends of the auxiliary and first veins; a single series of semi-hyaline spots in the first basal cell; an indistinct hyaline spot between two wrinkles in the apical portion of marginal cell opposite the end of first vein; two brown spots beyond the one eye-spot of the submarginal cell; two eye-spots in the first posterior cell. The second especially and the fourth veins very sinuate at their apical portion, the third not so much. The anal cell with a very long lobe. A very clear hyaline spot in the second posterior cell is sometimes confluent with the hyaline margin. The small cross-vein is colorless in the middle. Length 6 mm.

Guadalajara, Mex. One ♂. Type, coll. Acad. Nat. Sci. Phila. This species approaches *P. costalis* v. d. W., but the even coloring

of the wing, except where mentioned, not being reticulated with semi-hyaline spots, having only two brown spots beyond the eye-spot of the submarginal cell, the orbits not whitish, and the unspotted femora, will readily separate these two species.

***Pseudotephritis cribellum* Lw.**

Florence, Ariz. One ♂, three ♀.

These specimens seem to agree well with Loew's description, but the spot just before the apical band of the wing does not go beyond the second vein, except possibly in a faint shadow.

In addition, these specimens have the following characters: the thorax of females have two elongated brown spots just behind the suture line; a velvety black spot on each post alar callus, at the root of scutellum, with a conspicuous series of black, posteriorly directed bristle-like hairs; the posterior margins of the second and third segments have a brown border, sometimes interrupted in the middle, and the entire lateral margins of the third segment sometimes brown.

The thorax of ♂ is similarly marked, but there seems to be no bristle-like hairs on the black post alar calloses, and the abdomen is spotted with numerous minute brown spots, but only two large spots on the posterior dorsal margin of the second segment.

The shining black spots on the scutellum of both sexes are very large and separated only by a narrow pollinose stripe, which with the stripe at the base, give the spots a right angular appearance.

These characters are not noticeable in another specimen I have, but until more material is studied I do not think it advisable to separate them.

***Edopa capito* Lw.**

Highrolls, New Mex. Numerous specimens, ♂ and ♀.

***Parædopa punctigera* Coq. (Pl. VI, fig. 7).**

Highrolls, Alamogordo, New Mexico. Numerous specimens, ♂ and ♀.

***Stictomyia longicornis* Biq.**

Alamogordo, New Mexico. Twenty-three specimens, ♂ and ♀.

One ♀ from Guadalajara, Mexico, is larger and more distinctly marked than those from New Mexico.

This species is well figured in the Biol. Cent.-Am., Vol. II. It will fall in the subfamily Ulidiinæ, but its unusually long antennæ separates it from all others of that group.

The genera *Stictomyia* and *Parædopa* may be separated as follows:

1. Head conspicuously large; antennæ situated as far or further apart than the length of the first two joints; cheeks and face swollen.....1a.
Not having these characters.....2a.
- 1a. Eyes round, about one-half height of head.....2.
Eyes higher than long, more than one-half the height of head.
- Parædopa** Coq.
2. Third joint of antennæ round, front smooth, not rugose**Ædopa** Lw.
Third joint of antennæ elongate, upper part of front rugose.
- Eurycephala** Roed.
- 2a. Antennæ much longer than face; face with two large shining callosities beneath the antennæ, not concave**Stictomyia** Big.
Antennæ not longer than face; face with no callosity, flat or concave.
- 3 of manual.

This table is to be used in connection with that given under Ulidiinæ, page 118 of Williston's Manual of the Families and Genera of North American Diptera (2nd edition), and is numbered to correspond with it.

Acrosticta bicolor sp. nov. (Pl. VI, figs. 8, 9, 10).

Dull green and black, excepting the tibia, tarsi and the second and third abdominal segments.

Head nearly twice as wide as high, and about as long, generally black. Front broad, smooth, one and a quarter times as wide as the eye, nearly horizontal, not punctate or rugose, somewhat depressed, projecting forward at the antennæ, covered with minute hairs, dark brown near the antennæ, but black at vertex; orbits parallel, dusted with white; one pair frontal bristles. Face black or very dark brown, wide, in profile slightly excavated only in ♂, but the foveæ rather deep; pollinose beneath the antennæ; carina wide, obtuse, minutely grooved in front above the oval margin. Cheeks black, about half as wide as the eye height. Posterior orbits greenish. Occiput flat. Clypeus black, distinct, small, not projecting forwards.

Antennæ black, rather elongate; third joint about twice as long as wide, nearly half as thick as wide, rounded at apex; arista distinctly thickened at base. Proboscis black, short, robust. Palpi black at tip, nearly filiform.

Thorax dull bluish green, thickly pollinose above, slightly so on the pleura, narrower than the head, somewhat longer than wide; bearing one pair post dorso-centrals, one pair post acrosticals, two superalars, two post humerals, one humeral, one prealar, one mesopleural, one sternopleural, otherwise covered with scattered minute hairs. Scutellum shining green, convexed, pointed, bearing four marginal bristles. Squamulæ snow-white. Halteres white.

Abdomen semi-shining green, excepting the scarlet posterior half of first, all of second, and anterior half of third segments elongate, as long or longer than the

thorax, and about as wide, broadest at its second segment, then tapering slightly to a narrow fourth segment; the last segment of ♂ blunt and very much enlarged ventrally, and of both sexes minutely granular, giving a shining but not glossy appearance. The ventral segments brown to blackish green. First section of ovipositor shining green, flat, hairy below (the remainder wanting in this specimen).

Femora thickened, greenish brown at joints, with no prominent bristles; coxæ, tibiæ and tarsi dark brown.

Wings with costal cell and stigma brown, one large spot at the apex of marginal, and submarginal cells diffusing into the first posterior cell to the fourth vein; its posterior border perpendicular; first vein bare; third vein straight; fourth vein converging towards the third at the apex, leaving the opening about as wide as the small cross-vein, the last section twice as long as the preceding section; fifth vein extending to the margin, anal cell with a straight pointed lobe; cross-veins perpendicular, the anterior one just beyond the middle of discal cell. Length ♂, 4 mm.; ♀, 5-5½ mm.

Ysleta, Texas (Viereck and Rehn). Type coll. Acad. Nat. Sci. Phila., one ♂ and one ♀.

This species seems to be a distinct departure from the typical *Acrosticta* by its smooth front. The clypeus is distinct but not projecting. These characters alone will separate it from the other species of this genus. Loew does not refer to the minute granulation of the abdomen, which is very distinct in this species, giving it a semi-glossy appearance. With more material and comparisons with others of this genus, this species may introduce a new genus. For this reason I include generic characters in the above description.

Euxesta minor sp. nov. (Pl. VI, fig. 12).

Front rufous, narrower towards antennæ, slightly projecting, flat, with few scattered minute bristles; vertex shining greenish black, as is the ocellar region and each side along the orbit to the middle of front; two frontal bristles. Face more yellow, pollinose in the excavations and along the orbits. Cheeks yellow. Clypeus yellow, projecting as far as front. Occiput black above, pollinose. Antennæ rufous; third joint round, brownish on anterior edge; arista black. Palpi yellow. Proboscis brownish.

Thorax green, with coppery reflections, slightly pollinose above; bristles normal; the pleuræ like-colored. Scutellum convexed, of a metallic coppery color. Squamulæ and halteres white.

Abdomen shining, brownish, posterior margins of third and all of fourth segments yellow. First section of ovipositor brownish, as wide as fourth segment, and about two-thirds as long as the abdomen.

Legs translucent yellow, with posterior tibiæ and the apical joints of all tarsi, brownish.

Wings with a black spot at the apex of marginal cell and extending to the fourth vein; another on the stigma extending to and reaching the fourth vein; the base of costal cell brownish; third and fourth veins nearly parallel at apex; the fifth vein reaches the margin. Length 2½ mm over all.

Alamogordo, New Mex. Two ♀. Type, coll. Acad. Nat. Sci. Phila.

The small size of this species is very noticeable. It approaches *E. spoliata* Lw., but the tibiae are not so dark, and the stigmatic spot extends distinctly to the fourth vein. The metallic coloring may not be reliable, but the coppery scutellums of these specimens are very vivid. The coloring of the feet will separate this from *pusio* Lw., *notata* Wied. and *costalis* Fab.; its yellow face and entirely yellow legs will separate it from *apicalis* Will.

Euxesta notata Wied.

Alamogordo, New Mex. One ♂.

Euxesta pulchella sp. nov. (Pl. VI, fig. 11).

Head entirely black, but front somewhat dark brownish, not projecting much beyond the eyes at the antennæ, orbits parallel, with a pollinose spot on each about midway between vertex and antennæ, otherwise shining; two frontal bristles; vertex greenish black. Face shining, of a bluish color, pollinose about the antennæ base and along the brownish orbits. Clypeus projecting about as far as the front. Cheeks shining. Palpi and proboscis black. Occiput slightly pollinose. Antennæ dark brownish; third joint rounded, slightly longer than wide; arista bare, black.

Thorax green, dorsum pollinose; pleura shining; bristles normal. Scutellum shining green, convexed, pointed. Squamulæ white. Halteres cream colored.

Abdomen shining; first segment green; second and third bright metallic copper color; the fourth and fifth entirely chrome-yellow, with the lateral angles and venter tinged with copper. First section of ovipositor brownish yellow, as long as the last two segments and one-half as wide as the abdomen.

Legs mostly black; hind metatarsi yellow; the remaining tarsi and those of the others, brownish.

Wings with a large apical spot including the apices of the marginal and sub-marginal cells and diffusing into the first posterior cell; stigma black and costal cell entirely brownish; third and fourth veins converging towards apex. Length 2½ mm.

Alamogordo, New Mex. One ♀. Type, coll. Acad. Nat. Sci. Phila.

A very striking species. Closely allied to *E. notata* Wied., from which it differs in its smaller size, nearly one half as long, in the coppery second and third, and the entire fourth segments. The front is more black, hardly a distinguishable brown.

Euxesta stigmatias Lw.

Guadalajara, Mex. One ♀.

Chaetopsis ænea Wied.

Highrolls, New Mex. One ♀.

I will also note here two ♀ specimens of *Epiplatea erosa* Lw. from Costa Rica, which have the third antennal joint brown, not "nearly black;" abdomen black, with deep pure blue reflections, very bristly along the margin of segments; legs dark, excepting the more yellowish tarsi.

EXPLANATION OF PLATE VI.

- Fig. 1. *Hiatus fulvipes*, ♂, lateral view.
 " 2. " " ♀, " "
 " 3. " " wing.
 " 4. " " hind femur of ♂.
 " 5. *Automola rufa*, wing.
 " 6. *Pterocalla undulata*, wing.
 " 7. *Parædopa punctigera*, wing.
 " 8. *Acrosticta bicolor*, wing.
 " 9. " " lateral view of head of ♀.
 " 10. " " front view of head of ♀.
 " 11. *Euxesta pulchella*, wing.
 " 12. " *minor*, wing.

